

Conservation of Endangered, Threatened and Nongame Birds Performance Report, 1 July 2001 to 30 June 2002

by Sumner W. Matteson

SUMMARY

The Wisconsin Department of Natural Resources continued the endangered, threatened, and nongame birds' conservation program.

Nesting surveys were conducted for the Red-necked Grebe, Great Egret, Red-shouldered Hawk, Osprey, Bald Eagle, Greater Prairie Chicken, Piping Plover, Common Tern, Forster's Tern, Caspian Tern, Barn Owl, and Loggerhead Shrike. Results of the surveys, not necessarily representative of complete coverage for each species, are presented.

Forster's Tern nesting platforms were installed at a site on Lake Puckaway in Marquette County. Habitat management for nesting Forster's and Common Terns occurred on Lake Butte des Morts, for Forster's Terns on Lake Puckaway, and for Common Terns on Lake Superior.

The state of Wisconsin with over 100 partners continued development of the Wisconsin Bird Conservation Initiative, which aims to provide a full spectrum of bird conservation in the state through game and nongame bird projects.

The Whooping Crane Eastern Partnership involving the WDNR, the International Crane Foundation, U.S. Fish and Wildlife Service, Operation Migration, and several private organizations is proceeding on schedule with plans to establish a second breeding and migratory flock of Whooping Cranes in the United States.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Bureau of Endangered Resources

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Study 215: Conservation of Endangered, Threatened and Nongame Birds

Performance Report 1 July 2001 to June 2002

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JOB 215.1: RECOVERY PLANNING

No funds were allocated for this job. Recovery plans have been completed for Bald Eagle, Osprey, Peregrine Falcon, Common Tern, Forster's Tern, Caspian Tern, Cerulean Warbler, Yellow-Crowned Night Heron, Barn Owl, Trumpeter Swan, Loggerhead Shrike, and Red-necked Grebe.

JOB 215.2: STATEWIDE INVENTORY

Red-necked Grebe *Podiceps grisegena* (endangered)

The official state status of this species was changed in 1997 from threatened to endangered. The only reported nesting areas in 2002 were in the Horicon Marsh area in Dodge County, Rush Lake in Winnebago County, and possibly Phantom Lake Flowage (Crex Meadows Wildlife Area) in Burnett County.

There were a total of 38 adults counted during the 2002 breeding season at 3 sites, compared with 32 adults at 2 sites in 2001 and 18 birds observed at 3 sites in 2000. Presence/absence of birds are summarized below.

Rush Lake (Winnebago County; T17N, R14E, S14, 23, 26, 27) –Thomas Ziebell (pers. comm.) reported "normal" water levels for 17 June 2002, compared to "high" levels he had seen on 17 June 2001. He documented 13 breeding sites, 32 adults, and 3 young on 17 June 2002: 11 nests (composed of *Scirpus*) with eggs (3w/4 eggs, 3 w/3eggs, 2w/2 eggs, 3w/1 egg), 1 pair with 2 young, 1 adult with 1 young, and 17 adults not associated with nests at 9 different sites on the lake, including 6 pairs. In 2001, he found 2 nests with eggs, 2 separate families with 1 young each, and another 12 separate pairs; he counted a total of 28 adults on the lake in 2001. In 2000, he documented 16 adults and 7 nests with eggs (compared to 1 nest containing 1 egg in 1999; 9 nests in 1998 with 20 eggs).

Phantom Flowage (Crex Meadows Wildlife Area, Burnett County; T38N, R18W, S06) – Jim Hoefler (pers. comm.) observed 2 pairs on Phantom Lake throughout the summer of 2002 but didn't observe any young. In 2001, he observed 2 pairs at the south end of Phantom Lake in early summer, with one of these pairs feeding 2 young on 9 August 2001.

Hanten Pond (St. Croix County; T31N, R17W, S04 SE; S09) – No nesting has occurred here since 1988.

Bierbauer Lake (St. Croix County; T31N, R17W, S04 NW; S05 NE) – This site was not surveyed in 2002 nor in 2001.

Oakridge Lake (St. Croix County; T31N, R17W, S08, 09) – Kris Belling (pers. comm.) and associates did not observe any Red-necked Grebes at Oakridge Lake in 2002. They were not able to conduct surveys here during 2001. In 2000, one lone adult was sighted on the lake, which at the time constituted the first time in 5 years that any Red-necked Grebes had been observed on the lake.

Old Elk Lake (Dunn County; T27N, S09) – This site was not surveyed during the reporting period.

Grassy Lake (Columbia County; T11N, R11E) – No surveys occurred here during the reporting period.

Harvey and County DM Pond (Columbia County) – No birds have nested here since 1998.

Lake Barney (Dane County; T09N, R09E, S34 SE) – No birds have been observed here since 1998.

Waunakee Wetland (Dane County; T09N, R08E, S35) – Jim Stephenson (pers. comm.) did not report any birds on this 40- acre site during the reporting period.

Rowe Marsh (Columbia County; T11N, R10E, S16W) – This site has errantly reported as “Rose” Marsh in previous reports. No reports were received about this site during the reporting period.

Bong Recreation Area (Kenosha County; T02N, R20E, S15, 22) – There were no birds sighted here in 2002 nor in 2001 (Jim Jacklee pers. comm.).

Lake Mariah (Green Lake County; T14N, R20E, S25, SENE and S30, SWNW) – Sam Robbins (pers. comm.) observed 1 adult on 14 July 1998, but there have been no reports since then.

Patrick's Lake (Dane County; T09N, R07E, S34) – This site was not visited in 2002 nor in 2001.

Horicon Marsh National Wildlife Refuge (Dodge County, T13 N, R15E, S12 NE1/4) – Aaron Holschbach (pers. comm.) reported that he observed an active nest (1 breeding pair) near Old Marsh Road on 17 June 2002. No further details were provided.

Great Egret *Casmerodius albus* (threatened)

Great Egrets were known to nest at 7 sites in 2002: the Oshkosh Area, Rush Lake, Lake Winnebago, Cat Island in Lower Green Bay, Mertes Slough and Smith Slough on the Mississippi River, and Green Island on Lake Michigan. Results are presented below.

Millers Bay (Oshkosh, Winnebago County; T18N, R17E, S16) – Tom Ziebell (pers. comm.) reported 175 nests in black locust, cottonwood, and box elder at a rip-rapped breakwall island in Millers Bay, Lake Winnebago, in June 2002. In 2001, he found 160 Great Egret nests here (compared to 178 nests in 2000, 55 nests in 1999, and 2 nests in 1998).

Rush Lake (Winnebago County; T17N, R14E, S12 SW1/4) – Tom Ziebell (pers. comm.) reported 2 nests in a mixed colony of Great Blue Herons (4 nests) and Great Egrets. The colony was observed in "mature trees" on 11 May 2002.

Long Point Island (Lake Winnebago, Winnebago County; T17N, R17E, S34) – Tom Ziebell (pers. comm.) observed at least 12 Great Egret nests in the central portion of the eastern end of the island in June 2002; he did not land at the island so could not obtain an exact count of nests. It was a mixed colony of egrets and Black-crowned Night-Herons. He heard "many young."

Four-mile Island (Horicon Marsh WLA, Dodge County; T1N, R15E, S19 SE1/4) – Bill Volkert (pers. comm.) reported no Great Egrets nesting here in 2002. Great Egrets have not nested here since 1994, when a mixed rookery/colony of Great Egrets (121 Great Egrets), Double-crested Cormorants (*Phalacrocorax auritus*) (406 nests), and Great Blue Herons (*Ardea herodias*) (337 nests) totaled 864 nests.

Cotton Island (Horicon Marsh WLA, Dodge County; T12N, R16E) – Bill Volkert (pers. Comm.) reported no egret nesting during the reporting period. Egrets nested here in 1997 and 1998, but not during 1999-2001. In 1998, a mixed rookery of 500 nests of Great Blue Herons, Great Egrets, and Double-crested Cormorants suffered irreparable damage when a severe storm toppled most nest trees on 31 May. Production was 0 that year.

Brushwood Island (Fox Lake, Dodge County; T13N, R13, S23, NE1/4) – Maureen Rowe (pers. comm.) observed 2 nests here in 1997 but no nests in 1998 and 1999. No nesting birds were observed here during 2000-2002 (B. Volkert pers. comm.).

Eldorado Marsh (Fond du County; T16N, R21E, S33) – We have received no reports of egrets nesting here since 1997, when a mixed colony of 40 Great Blue Herons and Great Egrets occurred here.

Cat Island (Brown County; T24N, R25E, R21E, S07) – Tom Erdman (pers. comm.) documented 18 nests here during 2002, with 3 on the ground. Production, according to Erdman, averaged 3-4 young/nest. About 17 nests occurred here in 2001, according to Erdman, including 2 ground nests. He reported 20 nests (18 in box elder, 2 on the ground) in 1999. In 1998, he observed 6 nests (3 nests with 3 young/ nest, 3 nests with 4 young/nest) in box elder.

Green Island (Door County; T30N, R25E, S19-20) – Tom Erdman (pers. comm.) reported a growing colony of 20-30 nesting pairs here in 2002. Great Egrets were also present in 2000 and 2001, but details were not submitted. He observed at least 23 nests on 12 July 1999 in

balsam fir and aspen, with 3-4 young in each nest. In 1998, he found about 19 nests, with 3-5 eggs each, in balsam fir and white spruce.

Nelson-Trevino Bottoms, Mertes Slough, and Whittman Bottoms (Buffalo County) – Eric Nelson (pers. comm.) reported that egrets were not present at Nelson-Trevino Bottoms (Hershey Slough; T22N, R14W, S2 NWSE; River Mile 761.9, Pool 4) and Whittman Bottoms (T20N, R12W, S34 NWSE; River Mile 737.6, Pool 5A) in 2002, nor during 1997-2001. At Mertes Slough (formerly known as St. Mary's Bottoms; 19N, R11W, S34, S1/2; River Mile 726.6, Pool 6), Nelson reported that adults were present in 2002, but information is not yet available. In 2001, 61 adults were present at Mertes Slough, but no count of nests occurred.

Blackhawk, Lansing Dike, Smith Slough, Ambrough Slough, Dago Slough, and Rosebrook Island (Vernon, Grant, and Crawford counties) – The Blackhawk rookery (River Mile 669), south of Blackhawk Park in Vernon County, has not been active since 2000 (Eric Nelson pers. comm.). Three Great Egret nests were counted here on 9 April 2000. This site was not surveyed in 1999, but was known to be an active in 1998. No Great Egrets were observed at Lansing Dike in 2002, nor during 1997-2001 (Eric Nelson pers. comm.). Egrets nested at Smith Slough in 2002, but data are not available. In 2001, 139 adults were counted at Smith Slough, but no count of nests occurred. There were 124 nests in silver maple and eastern cottonwood here in 1999 (Eric Nelson, pers. comm.). Sites at Ambrough Slough, Dago Slough, and Rosebrook Island have been abandoned, according to Nelson.

Red-shouldered Hawk *Buteo lineatus* (threatened)

John and Eugene Jacobs (pers. comm.) continued their Red-shouldered Hawk breeding ecology study in three areas: the Nicolet National Forest (NNF), northern Wisconsin counties (Door, Brown, Oconto, and Marinette), and central Wisconsin (Wood and Portage counties).

They checked 115 sites in 2002 (57 in the NNF, 27 south and east of the NNF, 31 in central Wisconsin) and found 48 active nests (18 in NNF, 13 south and east of the NNF, 17 in central Wisconsin), with 22 (46%) of these nests successful. A total of 56 young fledged (1.16 young/active nest and 2.54 young/successful nest).

In 2001, they found 112 sites (53 in the NNF, 26 south and east of the national forest, 33 in central Wisconsin) and found 53 active nests (14 in NNF, 16 south and east of NNF, and 25 in central WI) in 2001, with 30 of these successful (57%). A total of 66 young fledged (2.20 young/successful nest; 1.26 young/active nest).

Greater Prairie Chicken *Tympanuchus cupido pinnatus* (threatened)

The WDNR Bureau of Wildlife Management continued to coordinate the annual statewide census of booming grounds. Jim Keir (pers. comm.) reported 522 prairie chicken cocks at 6 central Wisconsin sites in 2002. The total number of prairie chicken cocks declined 11% from 2001 to 2002. The number of cocks recorded for the years 1995- 2002 (Jim Keir, pers. comm.) is presented below.

	1995	1996	1997	1998	1999	2000	2001	2002
Buena Vista Marsh	275	277	334	327	341	323	252	226
Leola	87	74	97	70	89	88	69	38
Paul Olson	83	87	100	129	139	194	174	176
Mead Wildlife Area	38	44	59	86	90	94	69	48
McMillan Wildlife Area	24	20	9	14	14	14	5	7
Outlying Area (incl. Searles Cranberry Marsh, Wood Co.)	31	39	22	30	26	36	17	27
Total:	538	541	621	656	699	749	586	522

Piping Plover *Charadrius melodus* (endangered)

On 5 June 2002, S. Matteson (pers. obs.) observed 2 pairs about 1 km apart on southeast Long Island (Chequamegon Bay Lake Superior) in an area traditionally occupied by breeding Piping Plovers. He observed the making of dummy scrapes by 1 pair and found no eggs. On 12 June 2002, S. Matteson (pers. obs.) returned with National Park Service intern Julie Kroll and observed 2 pairs of Piping Plovers at the same sites as observed a week earlier on southeast Long Island. One of these pairs was banded, with both adults banded on the right leg, orange band above black band above silver FWS aluminum band; the second pair was not banded. The banded pair (Michigan origin) nested; the nest scrape—20 m from the dune edge and 60 m from the water's edge—contained 4 eggs and was located at the following GPS coordinates: N46° 42'17.4"; W090° 45'18.9" (Map Datum: NAD27, CONUS). The unbanded territorial pair was located at the following site: N46° 42'28.2"; W090° 45'34.1.

On 18 June 2002, National Park Service Ecologist Julie Van Stappen and assistants installed a predator exclosure around the nest. A no-entry zone of a quarter mile was established around the nest. On 2 July 2002, Van Stappen checked the plover nest and found no eggs, with no sign of egg shells and no indication that the exclosure had been disturbed. They observed no young anywhere and assumed predation had occurred.

At Seagull Bar on Lake Michigan, where Piping Plovers had nested in 2001, no Piping Plovers nested in 2002. One migrant Piping Plover was observed at Seagull Bar on Lake Michigan by DNR wildlife manager John Huff (pers. comm.), 6 May 2002.

In 2001, 2 pairs of Piping Plovers nested in Wisconsin, including the one at Seagull Bar on Lake Michigan, which represented the first time in over 50 years this species nested along the Wisconsin shore of Lake Michigan. Breeding plovers returned to Long Island on Chequamegon

Bay, Lake Superior, as they had in 1998 and 1999. At least one of the Long Island breeding adults was the same bird from a pair of Michigan origin that nested on the island in 1998 and 1999. Details of the 2001 breeding are presented below.

On 16 May 2001, Julie Van Stappen (pers. comm.), Ecologist, National Park Service (NPS), reported 2 adults observed on southeast Long Island. Two birds were observed the following day in the same area. On 5 June, Van Stappen, NPS intern Heather Quint, and S. Matteson found a Piping Plover nest with 4 eggs on southeast Long Island (GPS coordinates recorded but not presented here.) The nest was 55.8 m from the lake water's edge and 14.2 m from the dune edge. NPS personnel installed a nest exclosure on 6 June. Julie reported 2 adults with 3 young on 9 July. On 11 July, Jennifer Stucker and Liz Price from the University of Minnesota joined NPS's Jeff Soltesz and Sumner to capture and band all 3 plover young. All 5 birds were observed again on 27 July 2001, and the young are believed to have fledged.

On 11 June 2001, BER Natural Areas Management Specialist Randy Hoffman observed a pair of Piping Plover adults at the east end of Seagull Bar on Lake Michigan. A single adult was reported by volunteer observer Jerry Smith on 13 June. On 20 June, S. Matteson and DNR wildlife manager John Huff found a Piping Plover nest scrape with 4 eggs on a sand ridge adjacent to a cattail marsh. The nest was ca. 150 m west of the eastern lake edge and ca. 120 m north of the southern lake edge; also ca. 275 m northwest of the southeast tip of Seagull Bar. On 22 June, Huff installed signs along the outer area of the site restricting access to authorized personnel only. On 25 June, Jennifer Stucker, Huff, and others installed a predator exclosure at the site. On 2 July, all 4 eggs were found scattered at varying distances from the nest with puncture marks. The eggs were salvaged and found to be near hatching when predated.

Common Tern *Sterna hirundo* (endangered)

The number of known colony sites dropped from 5 to 3 in 2002, with no Common Terns nesting in Green Bay for the third year in a row (Tom Erdman pers. comm.), and a traditional site on Lake Winnebago abandoned for the first time since its re-discovery in 1983. The number of known nests, however, increased 7% in 2002: 340 compared to 317 in 2001. Lake Superior colonies continue to comprise the overwhelming majority (82%) of the state's breeding population. The largest colony (195 nesting pairs) occurred at Interstate Island in the Duluth-Superior Harbor. Colony locations and number of young produced (if known) are presented below. Due to predation and other unknown factors on the Winnebago Pool Lakes, only Lake Superior sites are producing adequate numbers of young.

Ashland Pier (also called "Tern Island"), Lake Superior (Ashland County; T48N, R04W, S28) - Fred Strand (pers. comm.) observed 85 active nests on 17 June 2002; the peak number of nests counted on 12 June 2001 was 75. Unlike the 3 previous years, mink predation took a heavy toll at the colony site. By 2 July 2002, mink had killed 100 chicks, with 40 previously banded chicks missing; an additional 13 chicks were found dead, not predated. Lastly, an additional 12 chicks were predated by mink on 22 August 2002. At least 6 mink were trapped and removed during the breeding season, and terns re-nested on the island. In total, at least 165 chicks died as a result of mink presence on the island. Despite these losses, as many as 56 young may have fledged.

In 2001, production was very good, aided by successful mink-trapping efforts. The total number of chicks banded was 202, with 139 young fledged (1.85 young/nest, the same rate as in 2000 when 120 young fledged from 65 nests).

Interstate Island, Duluth-Superior Harbor; Lake Superior (Douglas County/St. Louis County; T49N, R14 W, S19, N1 / 2NENW) - Fred Strand (pers. comm.) reported a peak nest count of 195 nests on 21 June 2002, with 136 chicks fledged (0.70 young/nest) and 330 chicks banded. Mink predation apparently struck in late July and killed as many as 41 young.

In 2001, Strand reported 199 nests on 12 June 2001, a slight increase over the 188 nests documented in 2000 but lower than the 216 nests documented in 1998. The total number of chicks banded was 349, with 141 young fledged (0.71 young/nest), less productivity than the previous year when the number of fledged young was 202 (1.07 young/ nest).

Kidney Island, Green Bay (Brown County; T24, R21, S19) - Tom Erdman (pers. comm.) reported that no tern nested here in 2002 and 2001.

Pensaukee Dredge Spoil Island, Green Bay (Oconto County; T27 N, R21E) - Tom Erdman (pers. comm.) observed no nesting terns here in 2002. No birds nested here in 2000 either. In 1999, he reported only 12 nests (compared to 26 nests in 1998). No young survived to fledging in 1999 due to unidentified mammalian predation.

Bare Island (also known as White's Island), Lake Butte des Morts (Winnebago County; T19N, R19N, S36, NW) - No terns nested here in 2002. On 8 June 2001, S. Matteson and volunteer Daryl Christensen documented 14 nests with eggs on a gravel substrate. No terns nested here in 2000. In 1999, Common Terns did not nest on the island, completely abandoning the site, perhaps due to the presence of a newly conducted breakwall that lies within 50 m of the island. The 2001 colony, however, was washed out by a severe storm that hit the area on 11 June. These terns attempted to re-nest 200-250 m northwest of the island on the Terrell's Island breakwall. Here, DNR biologist Art Techlow and S. Matteson observed 22 nests with eggs on 3 July 2001. On 18 July 2001, Techlow observed Common Terns diving at a mink at this site. The colony failed.

Sand Island #4, (inside) Terrell's Island Breakwall, Lake Butte des Morts (Winnebago County; T19 R15E, S35 NWSE) - This dredge spoil island (N44° 04'49.4", W088° 39'46.1") lies ca. 300 m west of Bare Island. S. Matteson and Art Techlow observed counted 10 Common Tern nests here on 30 May 2002, and 60 nests (40 w/3 eggs, 13 w/2 eggs, 4 nests w/1 egg, 2 nests with 1 chick each, and 1 nest w/2 eggs and 1 chick) on 26 June 2002. On 16 July 2002, they returned to the island to band young but found only 1 young to band and observed 5 newly fledged young. Many nests had been abandoned with full clutches of eggs. 2002 was the first year birds nested here.

Willow Tree Island, Lake Winnebago (Fond du County; T16N, R17E, S03, center of SW) - On 30 May 2002, S. Matteson and Art Techlow observed 3 Common Terns in flight near the island but found no tern nests on the island itself. Returning to the island on 26 June 2002, they found no terns present. This was the first time since 1983 that Common Terns have not nested at the island. A year earlier on 8 June 2001, S. Matteson and Daryl Christensen counted 18 nests with eggs on bare ground; all but 2 nests (found at the island's northwest end) were located in central portions of the island. The colony, however, was washed out by a severe storm that occurred on 11 June 2001. Evidence of waves overrunning the island and flooding the colony site was apparent. No terns attempted to re-nest at or in the vicinity of the island.

Forster's Tern *Sterna forsteri* (endangered)

In 2002, at least 562 breeding adults occupied 5 colony sites. There were 485 breeding adults documented at 4 colony sites in 2001. For the fourth year in a row, no Forster's Terns nested in Green Bay, Wisconsin. The distribution of colonies, number of nesting pairs, and young produced (if known) in 2002 are presented below:

Long Tail Point (Brown County; T25N, R21E, S30, 31) Tom Erdman (pers. comm.) observed no nesting Forster's terns here during the reporting period.

Sensiba Marsh (Oconto County; T25N, R20E) - No Forster's Terns bred here in 2002, and have been absent since 1997, when Tom Erdman (pers. comm.) reported that 2-3 pairs nested in the marsh.

Duck Creek (Brown County; T23N, R20E, S10) Tom Erdman (pers. comm.) did not observe any nesting Forster's Terns here in 2002; terns have not nested here since 1998, when he observed about 45 nests in cattail stands.

South Oconto Marsh (Oconto County; T28N, R22E, S21). Tom Erdman (pers. comm.) reported no Forster's Terns here in 2002. Terns have not nested here since 1998, when Erdman estimated that 50-60 pairs nested in cattail stands.

Lake Poygan (Winnebago County; natural sites "WW," "W" and "E"; T19N, R14E S01NW, S02NE) - On 16 July 2002, S. Matteson and Art Techlow counted 54 fledged young and 4 pre-fledged young, including several being fed by a total of 29 adults at scattered sites across Boom Bay. A colony of unknown size (perhaps 50 pairs?) most likely nested in the vicinity.

Lake Butte des Morts (Winnebago County; T19N, R15E, S35, NWSE) - On 30 May 2002, S. Matteson and Art Techlow counted 97 Forster's Tern nests with eggs on a dredge spoil island (Island No.2) inside Terrell's Island breakwall. The colony was located at the following coordinates: N44° 04'51.2"; W088°39'51.9". The nests were all 7-18 inches above water. A second visit on 26 June 2002 to band young revealed that 140 nests were re-nests (4 nests w/4 eggs, 48 w/3 eggs, 63 w/2 eggs, 25 w/1 egg), and another 5 nests contained chicks (3 w/1 chick each; 2 w/2 chicks each). It is uncertain what caused the loss of most of the previous first clutches. Returning on 16 July 2002, many nests contained abandoned eggs, and we found only 1 young, previously banded during our 26 June visit. Smartweed growth approached 2 m and may have been a factor in nest abandonment.

In 2001, 124 Forster's Tern nests with eggs occurred on the same island. This is one of a series of recently created artificial islands established for waterfowl and tern production. Over 100 young had fledged at this site by 18 July 2001 (Art Techlow pers. comm.).

Lake Puckaway (Green Lake County; T15N, R15E, S17) - S. Matteson and Daryl Christensen (pers. comm.) documented 2 colonies, one largely on artificial nesting platforms and the second on windrowed *Phragmites* on 31 May 2002. The mostly platform colony was divided among 4 subcolonies: 6 nests on platforms (4 w/3eggs; 1 w/2eggs; 1 w/1egg); 13 nests on platforms (12 w/3eggs; 1 w/2 eggs); 9 nests on platforms (7 w/3 eggs; 1 w/2 eggs; 1 w/1 egg); and 4 nests on windrowed *Phragmites*. The second colony, located about 300 m east on an island called Pancake Island, comprised of cattail, willow, and *Phragmites*, contained 28 nests (16 w/1 egg; 7 w/2 eggs; 5 w/3 eggs) on windrowed *Phragmites* and cattails. Christensen estimated that at least 70 young fledged in total from both colony sites combined.

On 8 June 2001, 10 artificial nesting platforms each contained a nest with eggs. Approximately 250 m southeast of this platform colony was a colony of 79 nesting pairs with nests on windrowed cattail stalks. It is unknown how many young fledged, but at least 41 fledged young were counted on 4 September 2001.

Rush Lake (Winnebago County; T17N, R14E) - Tom Ziebell (pers. comm.) observed 101 adults and 10 nests on 17 June 2002. He had seen only 20 adults a year earlier on 17 June 2001 and found no nests. In contrast, he reported 39 adults and 2 nests on 17 June 2000, 55 adults and 5 nests on 19 June 1999, and 69 nests and 224 adults here on 19 June 1998.

Big Muskego Lake (Waukesha County; T05N, R20E, S22) - On 29 June 2002, Terri Beth Peters and Jon Bielefeldt (pers. comm.) observed 32-36 adults with 6 nest sites identified and 6-8 potential nests or re-nests as judged by the birds' behavior. No Forster's Tern chicks or fledglings were observed. Isolated or widely scattered cattail was present but recovery of cattail islands after near-complete loss in 2001 was still very sparse. Forster's Terns nested on small amounts of dead cattail stems or very shallow mud banks with floating cattail.

In contrast, on 15 June 2001, S Matteson (pers. obs.) identified 8 subcolonies with a total of 128 incubating adults on windrowed cattail mats. Noticeably absent, however, were cattail islands, evident during 1998-2000. There were 107 adults at 4 subcolonies in 2000, 70 adults at 4 subcolonies in 1999, and 90 adults at 4 subcolonies in 1998.

Caspian Tern *Sterna caspia* (endangered)

On 13 June 2002, Ken Stromborg (pers. comm.) documented 186 Caspian Tern nests on Pirate Island (T31N, R27E, S10) off the western Door County peninsula, Lake Michigan. About half of the eggs observed had hatched. He found 13 nests here on 21 June 2001. No other Caspian Tern nests were reported in 2002. Previous to 2001, the last reported nesting occurred in 1997 at the Kewaunee Harbor Dredge spoil containment site (T23N R25E S17) and at Renard Isle (Kidney Island; T24, R21, S19) in lower Green Bay. Tom Erdman (pers. comm.) observed 154 adults and 4 nests with eggs on 3 June 1997 at Renard Isle, where they also nested in 1988 and 1989. On 18 June 1997, he found 2 new nests with eggs. On 10 July 1997, however, the colony was completely deserted. Several Ring-billed Gulls had apparently been decapitated by Great Horned Owls (GHOW), and it is suspected that GHOW predation was responsible for desertion of the Caspian Tern colony.

Erdman (pers. comm.) also reported 2 nests observed in the middle of a Ring-billed Gull (*Larus delawarensis*) colony at the Kewaunee Confined Disposal Facility (T23N, R25E, S17) in 1997.

S. Matteson (pers. obs.) observed 15 adults on 11 July 1997 at the Milwaukee U.S. Coast Guard Impoundment (Milwaukee Harbor) (T06N, R22E, S04 and S09) but found no evidence of nesting; 6 pairs nested here in 1990.

Summering individuals continue to occur regularly along the Wisconsin shores of Lakes Superior and Michigan.

Barn-Owl *Tyto alba pratincola* (endangered)

There was 1 confirmed Barn Owl sighting in 2002, but no reported nesting. During the first to third week of February, Wayne Thatcher (pers. comm.) observed a barn owl near the peak of his barn, west of Oregon. He did not observe the bird again.

The last confirmed nesting occurred in 1999. On 18 August 1999, DNR warden Charles Horn contacted DNR warden Dennis Kirschbaum about an injured barn owl he had just picked up at a farm near Homer in northern Grant County; the bird died that night. On 21 August 1999, Horn and Kirschbaum met ornithologist Fred Leshner at a farmstead near Boscobel in Grant County (T07N R02W S10, NE SW) to check out a report of owls in the attic. One barn owl young, a pre-fledgling, was observed in the attic along with pellets, feathers, and whitewash. Another owl was observed in a sugar maple outside the main farmhouse.

On 20 October 1999, S. Matteson visited the site with Horn and Kirschbaum and found an abandoned clutch of eggs in the attic; the first evidence in the state of a second barn owl clutch during the same breeding season.

DNR wildlife manager Kris Belling (pers. comm.) reported a barn owl sighting on 19 March 2000. The site was a pole shed east of Olivet, Pierce County, T27N, R15W, S32, NE1/4. This bird may have been trapped in the shed. In addition, a road-killed Barn Owl was found on 4 April 2000 at T27N R18W S3 (K. Belling pers. comm.).

Loggerhead Shrike *Lanius ludovicianus* (endangered)

On 26 July 2002, Mark Palas (pers. comm.) observed 3 shrikes at the intersection of 150th Street and 100 Ave. about 6 km northeast of Roberts in St. Croix County. This is generally near an area where shrikes have nested in previous years. He recorded GPS coordinates as follows: 45°00.422, W92°29.814. Palas believes that the shrikes probably nested in the area.

There were, however, no confirmed reports of breeding shrikes received by our office in 2002, nor in 2001, although shrikes likely nested at or near traditional sites in St. Croix County. In 2000, a total of 3 active nests were documented. The first was reported on 27 June near Belleville in Montrose township (T04N, R08E, S16 SE) in Dane County. The nest was located in a pine amid a "line of about 8-10-foot pines that line the north edge" of a private residence (Michael Madell pers. comm.). There was no information on clutch size or production.

A nest site reported active during 1998-2000 at a Hudson subdivision in St. Croix County (T29N, R19W, S20, NE1/4) was likely active in 2001 but not surveyed.

Belling also reported a 2000 nest at a site between Roberts and Hudson in St. Croix County. The nest occurred in a red cedar "about 8 feet tall and 7 feet wide. The nest was about 3 feet high in the tree. The tree was in a grassy area just outside the mowed yard of a house in a relatively new subdivision. There were 7 eggs, all of which hatched by 19 May." All 7 young were banded with U.S. Fish and Wildlife Service aluminum bands

In 1999, there were 4 nests reported. A second 1999 nest occurred approximately .8 km east of the Hudson subdivision site described above, with the nest occurring in a white spruce within a residential front yard (T29N, R19W, S21, NW1/4). The landowner stated that shrikes had nested here for the past several years. Belling reported that at least 3 young fledged, with 1 unhatched egg found in the nest. The nest tree was approximately 12 feet high and 5 feet wide, with the nest occurring about 4 feet above the ground.

Tom Erdman (pers. comm.) reported that a 1999 shrike nest occurred in a blue spruce at a residence in Oconto County; 2 young fledged. Erdman also reported another shrike nest in a hedgerow in open agricultural land about 2 km north of the Kewaunee/Door County line.

MISCELLANEOUS REPORTS

American White Pelican *Pelecanus erythrorhynchos*

Cat Island (Brown County; T24N, R21E, S07) - For the ninth consecutive year, American White Pelicans nested on Cat Island in lower Green Bay, with 185-220 nests estimated in 2002, but only about 200 pelicans fledged (Tom Erman pers. comm.) No details were submitted also for the years 2000-2001. In 1999, there were 180 nests on the island, and 230 young produced (Tom Erdman pers. comm.).

Hat Island (Door County; T30N, R26E, S2) - White pelicans nested here for the first time in 2001 but did not return in 2002 (Tom Erdman pers. comm.). Ken Stromborg (pers. comm.) observed 3 nests on 21 June 2001. Two of these nests contained 3 live chicks each; 1 had 2 live young.

Horicon Marsh NWR (Dodge County) - For the fourth consecutive year, pelicans nested at the Horicon NWR, though exact locational data are not available. In 2002, pelicans nested on 7 islands within the refuge, along the Main Ditch, "just shy of W88⁰, 42'00", and ranged from north to south, from N43⁰, 33'30" to N43⁰, 32'45" (Dianne Penttila pers. comm.). Penttila estimated the pelican population to be 1,000-1,400 adults (including breeders and nonbreeders), with at least 340 young produced. In 1999, pelican nests (13) were first documented at Horicon Marsh (Tom Erdman, pers. comm.). The rapid increase in pelican numbers are attributed to an abundant fish supply and suitable nesting habitat.

Snowy Egret *Egretta thula*

No Snowy Egrets occurred on Cat Island, Green Bay, in 2002, nor during 1999-2001 (Tom Erdman pers. comm.). In 1998, Erdman observed 2 adults here, but didn't find a nest.

JOB 215.3: DETERMINATION OF MONITORING SYSTEMS

No monies were allocated to this job during the reporting period.

JOB 215.4: HABITAT MANAGEMENT FOR FORSTER'S TERN
AND BARN OWL

Objective

Provide secure nesting sites for Forster's Tern and Barn Owls through the installation of artificial nest structures or habitat management.

Findings

Forster's Tern

Volunteer Daryl Christensen and S. Matteson installed 32 artificial nesting platforms within *Phragmites* beds on east-central Lake Puckaway on 14 May 2002. Marsh hay was used for nesting material. All platforms were anchored individually with cement blocks or bricks tethered by 3/8-inch nylon rope approximately 8 feet long. Platforms were placed within 1 m of emerging *Phragmites*. Subsequent surveys by Christensen and S. Matteson revealed that most platforms were used by nesting terns.

An herbicide was used sparingly at 2 artificial island sites to improve nesting habitat conditions for Forster's and Common Terns during spring 2002 on Lake Butte des Morts.

No nesting platforms were installed in Green Bay, on Big Muskego Lake, nor on Lake Poygan during the reporting period.

JOB 215.5: HABITAT MANAGEMENT FOR COMMON TERN AND PIPING PLOVER

Objective

Provide secure colony sites for the Common Tern and nesting habit for Piping Plover.

Findings

Common Tern

During late spring, the outside perimeter of the colony site was fenced, as in the past nine years, to prevent pre-fledged young from escaping the site and to facilitate counts of chicks (Fred Strand pers. comm.). The north end of the island, however, has experienced serious structural damage due to wave and ice action and has largely deteriorated. Working with Wildlife manager Fred Strand, S. Matteson submitted a proposal to the Environment Protection Agency in 1999 for \$70,000 to re-build the island. The project was completed in October 2002 and shall be discussed in detail in the 2004 PR report.

Ring-billed Gull control (removal of nests and nest contents during weekly visits) occurred where terns nested at Interstate Island in the Duluth-Superior Harbor. The installation of a string grid over about an acre was successful in deterring Ring-bills from occupying tern nesting areas.

An herbicide was used sparingly at 2 artificial island sites to improve nesting habitat conditions for Forster's and Common Terns during spring 2002 on Lake Butte des Morts.

Piping Plover

A welded-wire fence enclosure was placed over 1 Piping Plover nest at the Long Island, Lake Superior nest site on 18 June 2002 to deter predators.

JOB 215.6: BALD EAGLE SURVEY AND MANAGEMENT

Bald Eagle *Haliaeetus leucocephalus* (formerly threatened)

Pat Manthey (pers. comm.) reports that complete breeding surveys were conducted statewide in 2002 by DNR Wildlife Management and Endangered Resources staff. Early spring aerial surveys documented occupied territories. In late spring, flights occurred again to count young in each nest. Preliminary data indicate that the state's Bald Eagle nesting population continues to grow, but in some areas growth has leveled off or declined. The total nesting population is expected to be similar to the 819 nests documented in 2001. For the second year in a row, numbers of nests and production of young have declined in northwestern Wisconsin.

Many eagle nests occurred on private lands. The Wisconsin DNR Eagle Committee and Wildlife Managers provided on-site guidance to landowners, as well as the booklet "Bald Eagles in Wisconsin - A Management Guide for Landowners."

The Bureau of Endangered Resources and Wildlife Management coordinated rescue and treatment of injured eagles, and monitored all causes of injury and death.

The Bald Eagle was removed from the Wisconsin Endangered and Threatened Species List in August 1997.

JOB 215.7: OSPREY SURVEY AND MANAGEMENT

Osprey *Pandion haliaetus* (threatened)

Pat Manthey (pers. comm.) reports that statewide Osprey aerial nesting surveys were conducted by DNR Wildlife Management and Endangered Resources staff in 2002. Nest occupancy flights occurred in late spring to locate nests, followed by productivity flights in midsummer to count young. Preliminary data indicate a slight decline in total numbers of nesting pairs. In northwestern Wisconsin, however, a pronounced drop in nesting pairs has occurred. The total nesting population is likely to be at or slightly below the 396 pairs documented in 2001.

Over 80% of Wisconsin's Ospreys build their nests on artificial structures, the remainder on natural snags and trees. Most nests are on artificial platforms that have been placed on poles or treetops. Nests have also been found on a variety of manmade structures not intended for Osprey use. Wildlife staff continued to work with power companies to place nesting platforms on new poles nearby and to discourage the birds from nesting on the power poles. DNR staff continued to assist landowners in efforts to provide more appropriate nest site locations. The number of platforms available for Osprey use has declined due to two major factors: eagles usurping platforms for their own nests, and lack of funds to maintain/replace existing platforms and install new platforms (Pat Manthey pers. comm.).

Wisconsin entered the seventh year of the Osprey translocation project. Eight chicks were taken from nests in northwestern Wisconsin and sent to hack sites in Iowa, with a goal of expanding the midwestern Osprey population. The birds were taken from nests with multiple young; one healthy young always left in the nest. These chicks were given health exams at The Raptor Center at the University of Minnesota, and all were found healthy before shipment to their final destinations.

Seven additional chicks were removed from nests in northwestern Wisconsin nests. Five of these were hacked at Big Muskego Lake in Waukesha County, Wisconsin, in an attempt to broaden the geographical distribution of Wisconsin's Osprey population. These chicks received their health exams at the Raptor Education Group facility in Antigo, Wisconsin. One chick died and was sent to DNR Wildlife Health for necropsy. Another chick was found to have a congenital defect and was placed in permanent captivity as an educational bird (Pat Manthey pers. comm.).

JOB 215.8: NEOTROPICAL MIGRANT LANDBIRD CONSERVATION

The Steering Committee for the Wisconsin Bird Conservation Initiative (WBCI) held their first meeting during the reporting period. WBCI aims to integrate game and nongame bird conservation in Wisconsin, including the development of specific projects benefitting neotropical

migrant birds. A number of committees and subcommittees have been formed to focus on projects by habitat groupings and ecological regions.

A third draft of a neotropical bird conservation plan for Partners In Flight Bird Conservation Region 12, formerly Physiographic Area 20 (northern Wisconsin, northeastern Minnesota, and northern Michigan) was completed during the reporting period.

Continuing efforts to educate and inform individuals interested in neotropical bird conservation, research, and management occurred during the reporting period, including bird walks and lectures on International Migratory Bird Day.

A status and habitat assessment report on the Bell's Vireo (BEVI) was prepared for The City of La Crosse for planning efforts to preserve critical BEVI nesting habitat.

JOB 215.9: FOREST RAPTOR CONSERVATION AND MANAGEMENT

A Forest Raptor Working Group and Forest Raptor Program were established during the reporting period. Jim Woodford (pers. comm.) provided the following summary from an unpublished WDNR report (Woodford, J., T. Rinaldi, L. Ayers, and W. Smith. 2002. Wisconsin DNR Forest Raptor Program, 2002 Summary Report. Wis. Dep. Nat. Resour. 13 pp.):

"Wisconsin Department of Natural Resources (DNR) staff involved with the Forest Raptor program continued work on several existing and new projects in FY02. All program work evolved into four project areas, although many tasks crossover into multiple project areas. The main project areas included nest validation and productivity monitoring of Northern Goshawks, GIS development for Northern Goshawks, Forest Raptor Education and training, and testing the feasibility of the aerial sightability model. Through this work, we are putting significant effort into increasing the awareness of forest raptors in Wisconsin with two objectives in mind. First, is the DNR's desire to assess the current population size and trend of a number of Forest Raptor species. Second, to develop science-based forest management guidelines that are beneficial to the species.

Under the Education project, we created and displayed a Forest Raptor Educational Booth at four conferences, distributed over 800 Northern Goshawk posters, and provided two workshops in April that were attended by field staff from DNR, US Forest Service, Menominee Tribal Enterprises, and other agencies. We continued to build on past GIS development accomplishments in FY02. Major accomplishments include the creation of a Northern Goshawk GIS database that meets both DNR data and locational standards, and development of a statewide habitat model that will predict the most suitable nesting habitat.

We checked 43 known or reported territories and found 18 occupied Northern Goshawk nests in 2002. These nests produced 1.0 young/active nest or 2.0 young/successful nest. Sixteen observations of new Northern Goshawk nests were reported to the Forest Raptor Program this year. We field checked all probable reports and found six new active territories. Staff worked with land managers to develop site specific management recommendations at six Northern Goshawk territories undergoing timber harvest."

JOB 215.10: WETLAND BIRD CONSERVATION AND MANAGEMENT

Surveys of wetland birds (shorebirds, Red-necked Grebe, Great Egret, Forster's Tern) continued in 2002.

Implementation of the Wisconsin Bird Conservation Initiative, inaugurated in May 2001, will promote wetland bird conservation and management through projects that benefit both game and nongame species. One WBCI project that is underway involves shorebird monitoring.

During the reporting period, S. Matteson and Bill Volkert undertook the second year of a cooperative project with the U.S. Geological Survey to establish a web site where volunteers can enter data on shorebird observations recorded at 12 sites in Wisconsin. In April 2002, the *Wisconsin Natural Resources* magazine featured an article on shorebirds and shorebird management.

S. Matteson worked with the Wisconsin Society for Ornithology to establish a shorebird management fund in honor of Rev. Samuel Robbins, author of *Wisconsin Birdlife*. Funds were distributed to three wildlife managers for shorebird management at wetland impoundments in 2001.

JOB 215.11: WHOOPING CRANE CONSERVATION AND MANAGEMENT

The Necedah/Central Sands area of the state of Wisconsin was selected in 1998 by the federal Whooping Crane recovery team as a site to introduce and establish a second continental Whooping Crane migratory and breeding population of least 25 breeding and migratory pairs. The draft federal rule to establish a nonessential, experimental population of Whooping Cranes in 20 eastern states was published on 9 March 2001. A chronology of events is presented below beginning with the year 2000 field season.

Preliminary work with 11 Sandhill Cranes involving imprinting on an ultralight aircraft and leading these cranes to a wintering area along the northwestern coast of Florida (Chassahowitzka NWR) was successfully accomplished in 40 days by 10 of the birds in 2000. Operation Migration (OM), a private Canadian conservation organization, flew the birds south. Nine of the 10 birds returned to the release area during the spring of 2001. The flock was first sighted on 27 April 2001 at the Necedah National Wildlife Refuge, at the same site where they had fledged the previous fall.

In 2001, 10 Whooping Crane chicks hatched at the Patuxent Wildlife Research Center were raised at the Necedah National Wildlife Refuge (NWR). The cranes practiced flying behind ultralight planes during early morning hours when weather permitted. Eight of the 10 birds migrated south following OM's aircraft, but 1 was killed when a storm caused it to fly into a power line and 2 were lost to bobcat predation on their Florida wintering site. Five whoopers successfully migrated back to Wisconsin in April 2002; 4 spent the summer predominantly at Necedah NWR, and 1 chose to summer at Horicon NWR. The 5 birds have also used numerous wetlands on state wildlife areas.

In 2002, 17 Patuxent Whoopers, raised in pens at Necedah, followed a similar regimen as the 2001 cohort. It is hoped that these birds will return to the release area during spring 2003.

The Whooping Crane reintroduction effort aims to establish 25 breeding pairs and approximately 125 whooping cranes in Wisconsin by the year 2020 as part of efforts to return a migratory population of Whooping Cranes to eastern North America.

Project updates and information are available at: <http://www.operationmigration.org> (Operation Migration's web site; see: *In the Field*); <http://www.bringbackthecrane.org> (the Whooping Crane Eastern Partnership web site); and <http://www.savingcranes.org> (International Crane Foundation web site).

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